

March 15, 2019

VIA ECFS

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, D.C. 20554

Re: Notice of *Ex Parte* Presentation
*TerreStar Corporation Request for Temporary Waiver of Substantial
Service Requirements for 1.4 GHz Licenses*, WT Docket No. 16-290

Dear Ms. Dortch:

On March 14, 2019, on behalf of TerreStar Corporation (“TerreStar”), John Dooley and Doug Brandon of TerreStar, Helgi Walker of Gibson, Dunn & Crutcher LLP, and Bryan Tramont and the undersigned of Wilkinson Barker Knauer LLP, met with Donald Stockdale, Dana Shaffer, Suzanne Tetreault, Jonathan Campbell, Charles Mathias, Roger Noel, Scot Stone, Tim Maguire, and Mary Claire York (by phone) of the Wireless Telecommunications Bureau (“Bureau”). During the meeting, we reiterated points made in TerreStar’s unopposed Petition for Reconsideration, as well as in subsequent filings,¹ in support of the Bureau’s reconsideration of its prior denial of an extension of the substantial service deadlines for TerreStar’s 1.4 GHz spectrum licenses.

Specifically, we explained that TerreStar could not meet the substantial service deadlines associated with its 1.4 GHz licenses through no fault of its own. Rather, TerreStar discovered that its plans to build a smart grid network – consistent with FCC rules – would have resulted in catastrophic interference to wireless medical telemetry services (“WMTS”) in the adjacent band – also operating consistent with FCC rules. As a result, rather than continue to pursue deployment of smart grid technology, TerreStar shifted its plans for the 1.4 GHz spectrum toward

¹ See Petition for Reconsideration of TerreStar Corporation, WT Docket No. 16-290 (filed Nov. 9, 2017); see also Letter from Eugene Scalia, Counsel for TerreStar Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 16-290 (filed Jan. 29, 2018); Letter from Bryan N. Tramont, Counsel for TerreStar Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 16-290 (filed July 17, 2018).

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commercial WMTS – the only use of that spectrum that would not result in significant harm to adjacent WMTS operations.

We also discussed the urgent need for additional spectrum for WMTS as recognized by the health care community,² by Congress,³ and by Chairman Pai.⁴ The addition of commercial spectrum for WMTS would significantly increase the number of patients that can be monitored and the depth of data that can be captured using the technology. For rural areas in particular, the need for additional WMTS spectrum is even greater to improve accessibility to healthcare services. We explained that the fastest way to make more spectrum available for WMTS is to grant TerreStar's Petition for Reconsideration.

Please contact the undersigned with any questions.

Sincerely,

/s/ Jennifer Tatel
Jennifer Tatel

Attachment

² See, e.g., Letter from the Alliance for Connected Care and the American Telemedicine Association, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 16-290 (filed Dec. 20, 2018) (“We write to express our concerns about the ongoing spectrum shortage for critical wireless medical telemetry services....”).

³ See Letter from Reps. Paulsen, Brady, McMorris Rodgers, Adams, Brooks, Kuster, Barton, Johnson, Diaz Balart, Clay, Bucshon, Lawrence, Rice, Baskett, Johnson, Pocan, Lewis, Emmer, Pittenger, Fitzpatrick, Gaetz, Poliquin, Barr, Katko, Kustoff, Faso, MacArthur and Cook, to Ajit Pai, Chairman, Federal Communications Commission (Oct. 24, 2108) (“Many healthcare facilities across the country are experiencing WMTS saturation...”).

⁴ See Letter from Eugene Scalia, Counsel to TerreStar Corporation, to Marlene H. Dortch, Secretary, Federal Communications Commission, WT Docket No. 16-290 (filed Mar. 4, 2019) (attaching letters from Chairman Pai to various members of Congress explaining that “expanding [WMTS] in the 1.4 GHz band is an innovative opportunity—and one that deserves [the FCC’s] attention”).



TerreStar Medical

Promoting Rapid Deployment of Enhanced Wireless Medical Telemetry

March 14, 2019

Overview and History:

Early Investment, Planning, and Discovery of Interference

- June 2008 – TerreStar purchases the 1.4 GHz spectrum that had been auctioned by the FCC in April 2007.
- June 2009 – Primary Federal incumbents finally cleared from the band; TerreStar begins investigation of use for smart grid applications.
- 2009 to 2012 – TerreStar and its lessee work closely with others to set standards and create an ecosystem for smart grid networks, including 8 separate device classes built and certified, all consistent with existing technical rules, and enters into spectrum lease arrangements with Pepco and FirstEnergy Service Company for smart grid service deployment.
- Fall 2013 – TerreStar meets with FCC staff to discuss a regulatory change normalizing power limits across the 1.4 GHz band for its smart grid deployment and the FCC suggested meeting with WMTS stakeholders.
- Early 2014 – TerreStar contacts WMTS industry representatives with deployments directly adjacent to its initial and planned smart grid deployments to discuss other technical issues. TerreStar first learns that its RF compliant smart grid operations could cause significant harmful interference to new adjacent-band medical telemetry systems.
- March 2014 – TerreStar meets with FCC staff to discuss potential technical rule changes in the commercial 1.4 GHz band.



Overview and History:

Pursuit of a Solution – Wireless Medical Telemetry

- Mid 2014 – TerreStar completes laboratory and field tests that confirm that compliant smart grid operations in TerreStar’s licensed spectrum would be expected to have a significant, deleterious impact WMTS devices and systems at health care facilities.
- February to August 2015 – Following testing, TerreStar concludes that smart grid networks cannot be configured to protect WMTS; TerreStar reassesses its options for the 1.4 GHz spectrum, including the possibility of deploying commercial medical telemetry systems.
- Fall 2015 – TerreStar begins to pursue its plan for wireless medical telemetry use of its licensed 1.4 GHz spectrum and actively prepares for WMTS deployment by meeting and working cooperatively with WMTS vendors and ASHE, and moving forward with initial application development and testing.
- December 2015 to July 2016 – TerreStar meets with FCC staff to discuss proposed wireless medical telemetry use of its spectrum, and subsequently consults with FCC staff prior to submitting waiver request.
- March 2016 – TerreStar begins working closely with WMTS industry representatives to develop a new commercial WMTS that would use the 1.4 GHz band. TerreStar works to develop a lease and registration system for spectrum access that provides equal access to commercial spectrum without the requirement for health care facilities to alter their procurement practices.
- August 2016 – TerreStar submits the waiver request.



Overview and History: Pursuit of a Solution – Wireless Medical Telemetry

- March to April 2017 – TerreStar engages in extensive, good faith negotiations and agrees to a number of performance milestones that would be included as conditions on a waiver grant; TerreStar files license renewal applications for its commercial 1.4 GHz licenses.
- October 2017 – TerreStar’s waiver request is denied.
- November 2017 – TerreStar files a petition for reconsideration of the Bureau’s denial. The petition is unopposed. ASHE, GE Healthcare, and Philips Healthcare file independent petitions for reconsideration that also remain unopposed.
- January 2018 – TerreStar provides FCC with supplemental legal analysis in support of its request for an extension or temporary waiver of the substantial-service requirements.
- February 2018 – Sen. Roger Wicker provides a letter of support to the FCC urging rapid action.
- July 2018 – TerreStar provides the FCC with TerreStar’s initial technical study regarding 1.4 GHz WMTS interference, which was completed in 2014.
- December 2018 – Twenty-eight members of the U.S. House of Representatives write a letter to the FCC urging rapid action.



Today, grant of TerreStar Medical's unopposed waiver request will allow the FCC to best achieve its goals.

- More Spectrum for Medical Telemetry Services.
- Interference Free Environment for Existing WMTS.
- Speed of Deployment.



Goal: Satisfying the Dire Need for WMTS Spectrum

There is a **well-documented need** for additional WMTS spectrum as recognized by the American Telemedicine Association, AHA, Philips Healthcare, GE Healthcare, elected officials, and others.

- WMTS is vitally important to improving patient outcomes and reducing the costs of our health care system.
- The number of locations that use WMTS is expected to increase significantly in the future as hospitals seek to better address the problems raised by an aging population.
- The addition of commercial spectrum for WMTS would significantly increase the number of patients that can be monitored and the depth of data that can be captured. WMTS systems used at VA hospitals will soon have to meet a new security standard and include advanced data encryption, which could lead to a 50% loss in bed monitoring capacity absent commercial spectrum.
- The American Telemedicine Association recently stated that “leading providers of WMTS technology have told the Commission in no uncertain terms that the available spectrum is insufficient.”
- Chairman Pai has stated “expanding Wireless Medical Telemetry Services in the 1.4 GHz band is an innovative opportunity—and one that deserves [the FCC’s] attention.”



Goal: Minimizing Harmful Interference in 1.4 GHz Spectrum

TerreStar Medical's proposed WMTS solution would put the 1.4 GHz spectrum to use in a way that **minimizes the interference issues**.

- The current technical rules permit operations that would interfere with WMTS.
- The interference issue that exists is outside of TerreStar's control, is not caused by non-compliance with existing rules, but is instead the result of insufficient receiver selectivity by incumbent WMTS.
- As repeatedly demonstrated in the record, adding this 1.4 GHz spectrum to the spectrum available for medical telemetry is the best, safest, and fastest solution for all stakeholders.



Goal: Rapid Deployment of WMTS Spectrum

TerreStar Medical's proposed WMTS solution provides **the only opportunity for rapid deployment** of additional spectrum for WMTS.

- TerreStar Medical has the infrastructure and relationships to deploy immediately – with full equipment certification and availability within six months of approval.
- TerreStar Medical is prepared to commit to quicker build than anyone else could accomplish. Within 18 months of approval, TerreStar Medical will demonstrate deployment to at least 50 large healthcare facilities.
- Waiver grant will be final agency action, ending regulatory and court litigation and uncertainty.



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